Labuntsov, V.A.

8(2); 28(1) PHASE I BOOK EXPLOITATION SOV/1133

Soveshchaniye po avtomatizirovannomu elektroprivodu peremennogo toka, Moscow, 1955

Trudy... (Transactions of the Conference on Automated A-C Electric Drives) Moscow, Izd-vo AN SSSR, 1958. 398 p. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Eds: V.S. Kulebakin, Academician, and M.G. Chilikin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: D.M. Ioffe; Tech. Ed.: I.P. Kuzmin.

COVERAGE: The conference was organized on the initiative of the Institute of Automation and Telemechanics of the Academy of Sciences, USSR, and the Moscow Power Engineering Institute and had as its aim the planning of the most progressive ways of developing automatic control of electric drives. The first conference on the subject of automated electric drive took place more than ten years before the present one and was concerned with d-c electric drives. The results of this conference were found to be most valuable in the task of rebuilding postwar Soviet industry and furthering industrial development. Present technical development of Soviet industry demands high speeds, simplicity of construction, reliability of operation, and economy. The squirrel-cage induction motor with frequency control appears to be the most promising type of controlled a-c drive. For wide application of this drive in the Soviet economy there is a need of developing new types of frequency converters. Some interesting studies were made in this connection at the Institute of Automation and Telemechanics of the USSR Academy of Sciences and its Leningrad branch, at the Moscow Power Engineering Institute, the Central Design Bureau of the "Elektroprivod Plant, the State Design Institute of the Ministry of Construction, of the RSFSR, and in other design organizations. These studies were discussed at the present conference. The transactions contain material concerning the theory and design of reactor, pulse, and frequency methods of controlling a-c electric drives. Candidate of Technical Sciences I.V. Utkin and Engineer V.A. Kokoreva participated in the preparation of this collection of papers. The volume was reviewed by Professor Ya. V. Mitusov, Doctor of Technical Sciences. Some of the papers include a bibliography.

TABLE OF CONTENTS:

LABUNTSOV, V.A.

25(1) PHASE I BOOK EXPLOITATION SOV/2383

Akademiya nauk SSSR. Komissiya po tekhnologii mashinostroyeniya

Avtomatizatsiya mashinostroitel'nykh protsessov. t. III: Privod i upravleniye rabochimi mashinami (Automation of Machine-building Processes. Vol3: Drives and Control Systems for Process Machinery) Moscow, Izd-vo AN SSSR, 1959. 370 p. Errata slip inserted. 5,000 copies printed.

Ed.: V.I. Dikushin, Academician; Ed. of Publishing House: D.M. Ioffe; Tech. Ed.: I.P. Kuz'min.

PURPOSE: This book is intended for engineers dealing with automation of various machine-building processes.

COVERAGE: This is the second volume of transactions of the second Conference on Overall Mechanization and Automation of Manufacturing Processes held September 25-29, 1956. The present volume consists of three parts, the first dealing with automation of engineering measuring methods. The machined parts, inspection automatic control of dimensions of machined parts, in-process inspection methods for automatic production lines, in-process linear devices, application of electronics in automating linear measuring processes, and machines for automatic inspection of bearing races. The second part deals with automatic drives and control systems for process machinery, including application of digital computers in the control of metal-cutting machine tools, relay converters in the control of induction gas-tube frequency amplifiers and their use in automatic motor speeds, magnetic drives, and ultrasonic vibrators. Part systems, hydraulic drives, and automatic machines and automatic production lines. The subjects discussed include three deals with mechanisms of automatic machines and automatic linkage, indexing, and Geneva-wheel-type mechanisms, friction drives, various auxiliary devices for automatic production lines, and methods of design and accuracy of cams. No personalities are mentioned. There are no references.

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PHASE I BOOK EXPLOITATION SOV/4595

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Sud, and E.F. Silayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the VNIIEM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to noncontact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of BII EP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL

LABUNTSOV, V.A.

SHIPILLO, Valentin Pavlovich; LABUNTSOV, V.A., red.; LARIONOV, G.Ye., tekhn. red.

[Systems for the grid control of the mercury rectifiers of automatically controlled electric drives] Sistemy setochnogo upravleniia rtutnymi vypriamiteliami dlia avtomaticheskikh elektroprivodov. Moskva, Gos. energ. izd-vo, 1961. 109 p. (Biblioteka po avtomatike, no.36) (MIRA 14:9)
(Electric driving) (Automatic control) (Mercury-arc rectifiers)

22883
S/089/61/010/005/011/015
B102/B214

21.1200

AUTHOR: Labuntsov, D. A.

TITLE: Critical thermal loads on forced motion of water which was not heated to the saturation temperature

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 523-525

TEXT: One of the possibilities for the increase of the thermal reactor power consists in increasing the intensity of heat exchange in the core. Experiments of this kind are, however, limited on account of a critical thermal load (which for underheated water can amount to 10^7 kcal/m^2·hr). When this load is reached there is a sudden deterioration of heat transfer (instead of bubble formation surface film is formed). Numerous experimental studies of this critical thermal load showed that it depends on pressure, current velocity, and underheating of the liquid; and is practically independent of the length, shape, and diameter of the pipe line. An effect of the diameter is first noticeable when the diameter is smaller than 2 mm. In the numerous publications pertaining to this problem the dependence of the critical thermal load on the parameters in the whole

Card 1/2

KOMAROV, V.G., prof., red.; LABUNTSOV, V.A., kand. tekhn. nauk, red.; ANTIK, I.V., red.; FRIDKIN, L.M., tekhn. red.

[Regulated transistor current rectifiers]Poluprovodnikovye upravliaemye ventili; sbornik perevodnykh statei. Moskva, Gosenergoizdat, 1962. 159 p. Translated articles. (MIRA 16:2)
(Electric current rectifiers)

SHIPILLO, Valentin Pavlovich; SIRITSA, Vasiliy Vasil'yevich; BULATOV, Oleg Georgiyevich; LABUNTSOV, V.A., red.; FRIDKIN, L.M., tekhn. red.

[Electromagnetic processes in a high-speed reversive electronic converter] Elektromagnitnye protsessy v bystrodeistvuiushchem reversivnom ionnom preobrazovatele. Moskva, Gosenergoizdat, 1963. 79 p. (Biblioteka po avtomatike, no.83) (MIRA 16:12)
(Electric current converters)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; NOPIRAKOVSKIY, I., inzh.

Magnetic and semiconductor system for controlling rectifier converters. Elektrichestvo no.2:29-34 F '65.
(MIRA 18:3)

1. Moskovskiy energeticheskiy institut.

L 9663-66 EWT(d)/EWP(1) LIP(c) BB/GG

ACC NR: AP5026506 SOURCE CODE: UR/0286/65/000/019/0036/0036

AUTHORS: Gorbachev, G. N.; Labuntsov, V. A.

36
B

ORG: none

TITLE: Ring shift register. Class 21, No. 175118

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 36

TOPIC TAGS: shift register, transistorized circuit

ABSTRACT: This Author Certificate presents a ring shift register of thyristors with capacitor switching, which produces scaling an even number of times. To increase the reliability and to decrease the required power, the load is connected in series with the capacitor between the anodes of thyristors operating in phase-opposition (see Fig. 1). Diodes are connected antiparallel to the thyristors.

Card 1/2 UDC: 621.314.572.07

L 9663-66

ACC NR: AP5026506

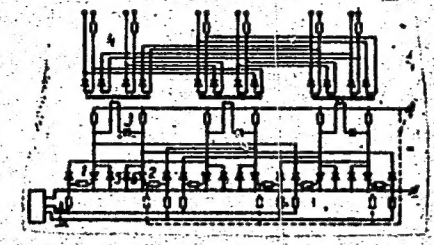

Fig. 1. 1 and 2 - Thyristors; 3 - switching capacitor; 4 - load; 5 and 6 - diodes.

Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 06Jan64

Card 2/2

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant; SAVEL'YEVA, A.A., inzh.

Transistorized frequency converter for the power supply of fluorescent lamps. Trudy MEI 55:73-80 '65.
(MIRA 18:10)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant

Transistorized control networks of multiphase autonomous inverters. Trudy MEI 55:65-72 '65. (MIRA 18:10)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; NOPIRAKOVSKIY, I., inzh.

Saw-tooth pulse generator using transistors and ferrites for high-speed network control systems. Trudy MEI 55:53-63 '65. (MIRA 18:10)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent

Transistorized-ionic frequency converter for the power supply of an asynchronous motor of a grinding electric spindle. Trudy MEI 55:11-20 '65. (MIRA 18:10)

LABUNTSOVA, M.A.

The "Vegetation of New Zealand" exhibit in the Main Botanical Garden. Biul. Glav. bot. sada no.55:48-50 '64.

1. Glavnyy botanicheskiy sad AN SSSR. (MIRA 18:11)

LABUR, I.

Let's confirm our initial successes. Mast.ugl. 3 no.2:10 F '54.
(MLRA 7:3)

1. Mashinist kombayna shakhty No.1 "TSentral'naya" kombinata Stalinugol'. (Coal mines and mining)

L 4979-66

ACC NR: AP5027719 44 55

SOURCE CODE: UR/0340/65/000/009/0017/0017

18
Q3

AUTHOR: Laburda, R. (Designer)

ORG: none

TITLE: Hydraulic rotary loader

44 55

SOURCE: Sel'skiy mekhanizator, no. 9, 1965, 17

TOPIC TAGS: tractor, construction machinery, agriculture, agricultural machinery, hoisting equipment/ HØN 50 loader

ABSTRACT: A high-speed universal HØN-050 hydraulically operated rotary tractor-type loader is being produced by the Podpolyanskiy mashinostroitel'nyy zavod (Podpolyanskiy Machine Construction Plant) in Czechoslovakia. Its 40-hp engine operates at 1500 rpm, and its dual-axle chassis and auxiliary equipment make it applicable to construction and agricultural operations. Aside from its standard equipment, HØN-050 is provided with a hydraulic system, rotary platform, boom on a circular rotary plate, and interchangeable working equipment. The latter includes 11 items such as grabs, shovels, buckets, hooks, forks, pipe-layers, etc.

Card 1/2

0901 1340

L 4979-66
ACC NR: AP5027719

A comfortable seat and a demountable cabin are provided for the operator whose work is made easier by good visibility. Orig. art. has: 2 photographs.

SUB CODE: IE/ SUBM DATE: none

Card 2/2

LABURENKO, K.I., inzh.; KAPLUN, M.I., inzh.; ABRAMOVICH, I.M., arkhitektor

Using soft limestone in making wall bricks for industrial building. Stroi.mat. 6 no.2:21-22 F '60. (MIRA 13:6)

(Limestone)

L 60307-65

ACCESSION NR: AP5019799 PO/0084/65/000/007/0019/0019

AUTHOR: Dziunikowski, K. (Docent, Doctor, Engineer); Labus, H. (Engineer); Rauk, J. (Master engineer); Stanowski, Z. (Master engineer)

TITLE: A method of extinguishing fires

SOURCE: Przeglad pozarniczy, no. 7, 1965, 19

TOPIC TAGS: fire extinguisher, foam extinguisher, foamed glass, water glass, fire prevention

ABSTRACT: The article describes a method of extinguishing a fire by covering the surface of a burning material with a layer of foam. This is achieved by pressure hosing the burning material with a solution of water glass having a density of 42° Baume. The solution, in addition to its cooling capacity, changes into a foam of solid consistency directly on the burning surface once it is heated to 170C, and thus produces a hard protective layer about 2 cm thick which is stable at higher temperatures; the layer has a volume per unit area 13 times the volume of solution used. Used in this manner, the solution does not release any harmful vapors and gases and thus can be used underground. The surface which is not yet burning but close to the fire can also be hosed with the solution, thereby providing, within

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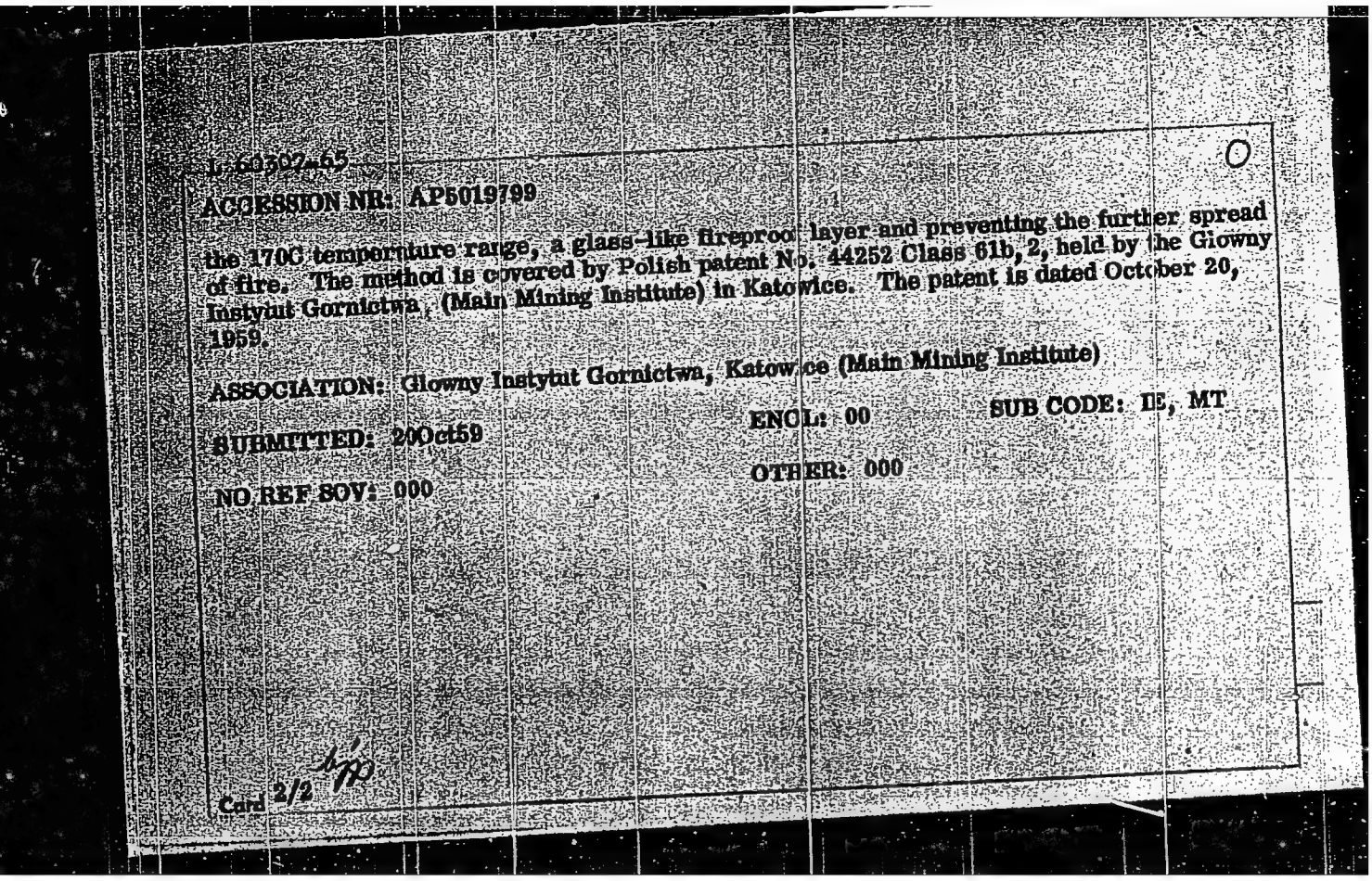


L 60302-65

ACCESSION NR: AP5019799

the 1700 temperature range, a glass-like fireproof layer and preventing the further spread of fire. The method is covered by Polish patent No. 44252 Class 61b, 2, held by the Glowny Instytut Gornictwa (Main Mining Institute) in Katowice. The patent is dated October 20, 1959.

ASSOCIATION: Glowny Instytut Gornictwa, Katowice (Main Mining Institute)

SUBMITTED: 20Oct59 ENCL: 00 SUB CODE: IE, MT

NO REF SOV: 000 OTHER: 000

Card 2/2

TOPOLSKY, L., dr.; SMEJKALOVA, J.; LABUS, I.

Treatment of internal genitalia with second line antituberculotics. Cesk. gynek. 30 no.1:40-43 Mr'65.

1. Liecebna pre tuberkulozu v Novom Smokovci (riaditel: dr. A. Krchnavy) a Gyn.-por. oddzial Obvodniho ustavu narodniho zdravi v Poprade (veduci: dr. L. Topolsky). 2. L.Topolsky's address: Poprad, Uzavreta 2.

TOPOLSKY, L. MUDr.; POLEDNIK, J., MUDr.; SMEJKALOVA, J.; LABUS, I.

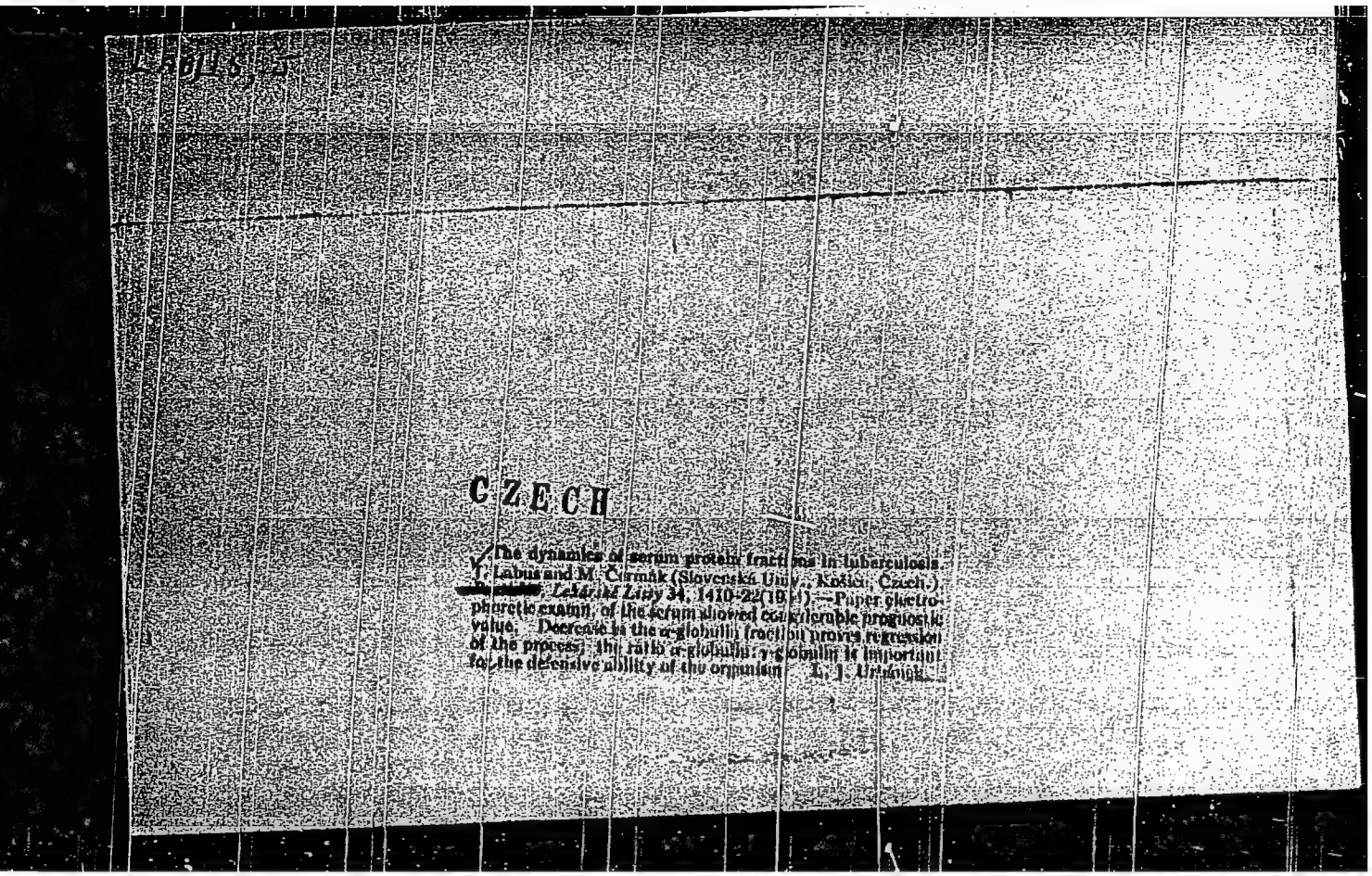
Fertility following treatment of tuberculosis of the internal female genitalia. Cesk. gynek. 44 no.3:198-201 Ap'65.

1. Gyn-por. odd. Obvodniho ustavu narodniho zdravi v Poprade (veduci: MUDr. L. Topolsky); Gyn.-por. odd. UNZ v Krompachoch (veduci: MUDr. J. Polednik) a Liecebna pre tbc v Novom Smokovci (riaditel: MUDr. K. Krchnavy).

MILAR, A.; PUZA, A.; LABUS, J.

Microelectrophoresis of serum proteins on chromatographic paper.
Lek. obzor 3 no.1-2:88-105 1954.

1. Z Ustavu pre vseobecnu biologiu a z Ustavu pre fyziologiu LFSU v Kosiciach.
(BLOOD PROTEINS, determination,
*chromatography)
(CHROMATOGRAPHY,
*of blood proteins)



CZECH

V. The dynamics of serum protein fractions in tuberculosis. T. Labus and M. Čirmák (Slovenská Univ., Košice, Czech.) [illegible] *Lékařské Listy* 34, 1410-22(1954).—Paper electrophoretic examn. of the serum showed considerable prognostic value. Decrease in the α-globulin (red) bd proves regression of the process; the ratio α-globulin : γ-globulin is important for the defensive ability of the organism. L. J. Urbánek

VAGAC, M.; LABUS, J.; KOREC, S.

Some aspects of surgical therapy of pulmonary tuberculosis by thoracoplasty. Bratisl. lek. listy 42 no.8:491-499 '62.

1. Z Krajskej nemocnice tuberkulozy v Podunajskych Biskupiciach a z Ftizeologickej katedry SUDL, riaditel MUDr. K. Virsik, a z tbc oddelenia polikliniky v Partizanskom, prednosta doc. MUDr. S. Korec.

(THORACOPLASTY)

LABUS, J.

Bratislava, Bratislavske lekarske Listy, Vol 1, No 5, 1962
Copyright by the Publishing House of the Slovak Academy of Sciences (Vydavatelstvo Slovenskej akademie vied), 1962.

1. "On the Vasoconstriction in Acral Skin Regions Induced by Deep Breathing, and the Possibilities of Its Practical Application," I. RUTTKAY-NEDECKY, Institute of Experimental Medicine of the Slovak Academy of Sciences (Ustav experimentalnej mediciny Slovenskej akademie vied); director (riaditel) of the Institute: J. ANTAL, Dr of Sciences and corresponding member of the Slovak Academy of Sciences; pp 457-464 (English summary).

2. "On the Dynamic Changes of Transaminase Activity in Toxic Injury to the Liver," by J. HRUZIK, A. JAVORSKY and J. LANGER. From the No 1 Clinic of Internal Medicine (I. interna klinika) at the Medical Faculty of Comenius University (Lekarska fakulta University Komenskeho) in Bratislava headed by (prednosta) Professor M. CHORVATICKA, MD; and from the Institute of Pathological Anatomy (Ustav patologickej anatomie) at the Medical Faculty of Comenius University in Bratislava headed by Docent M. BRODMAN, MD. Pp 465-475 (English summary).

3. "The Role of Psychic Factors in the After-Treatment of Menisectomy," M. VERGER and H. HALUZINCKY of the Clinic of Orthopedics (Ortopedicka Klinika) at the Medical Faculty of Comenius University in Bratislava, headed by J. CHMELARSKY, corresponding member of the Slovak Academy of Sciences; pp 476-481 (English summary).

4. "On the Importance of the Psychosomatic Component in Buerger's and Raynaud's Disease," V. ZIKMUND of the Department of Clinical Physiology (Oddelenie klinickej fyziologie) at the Institute of Experimental Medicine of the Slovak Academy of Sciences; director J. ANTAL, corresponding member of the Slovak Academy of Sciences; pp 481-491 (English summary).

5. "Late Results of the Surgical Treatment of Pulmonary Tuberculosis by Thoracoplasty," M. VAGAC, J. LABUS and S. KOREC. From the Kraj Tuberculosis Hospital (Krajska nemocnica tuberkulozy) in Podunajske Biskupice; the Department of Phthisiology (Ftizeologicka katedra) of the SUDL (Slovensky ustav pre doskolovanie lekarov; Slovak Institute for Post-Graduate Medical Training), director K. VIRSIK, MD; and from the TB Department of the Polyclinic in Partisansko (Tbc oddelenie polikliniky v Partisanskom) headed by Docent S. KOREC, MD. Pp 491-499 (English summary).

6. "The Adrenogenital Syndrome," Docent Z. DLHOS, MD, chief (prednosta), and T. VRCBEL, of the Obstetrics and Gynecology Clinic (Porodnicko-gynekologicka klinicka zakladna) of the Slovak Institute for Post-

— 1/2 —

LABUS, Jerzy

Int rglacial or preglacial fossil peats in the Jaworzno region. Przegl geol 13 no.2:75-76 F '65.

1. Sobieski mine, Jaworzno.

POLAND

NIEC, Marek; LABUS, Jerzy

1. Academy of Mining and Metallurgy (Akademia Gorniczo-Hutnicza) [Crakow] (for Niec); 2. Sobieski Coal Mine (Kop. Sobieski), near Jaworzno (for Labus)

Warsaw, Przeglad geologiczny, No 7, July 1966, pages 321-323

"Barite occurrence in the Sobieski Coal Mine near Jaworzno."

4/c ops.

[illegible] RUMANIA

Institute of Atomic Physics of the Academy of the RPR, (Institutul de Fizica Atomica al Academiei R.P.R.)

Bucharest, Studii si Cercetari de Fizica, No 4, 1964, pp 465-477.

"Study of Uses of the Reflectory Mixing of Light Particles, with the Aid of Calculative Devices." (Research carried out at the Institute of Atomic Physics of the Academy of the RPR in [illegible] 1962. The experimental part was carried out at the [illegible] Mathematical Cabinet, and the realizing and evaluation of the operations in the electronic laboratory of the Institute of Atomic Physics.)

Co-authors:

[illegible], M., Institute of Atomic Physics of the Academy of the RPR.

[illegible], A., Institute of Atomic Physics of the Academy of the RPR.

LAPUSCA, E.; TEITEL, T.

Experimental research on magnetic properties of Al-Ni-Fe sintered alloys.

p. 25. STUDII SI CERCETARI DI FIZICA. Bucuresti. Vol. 6, no. 1, Jan/Mar. 1955.

So. East European Accessions List Vol. 5, No. 8 August, 1956

Category : RUMANIA/Magnetism - Ferrites

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4043 F-5

Author : Labusca, Elena; Ionescu, M., Nicolau, Ed.
Title : Experimental Investigation of Nickel and Copper Ferrites.

Orig Pub : Comun. Acad. RPR, 1956, 6, No 5, 649-654

Abstract : Using methods that are peculiar to powder metallurgy, the author had developed a method for obtaining magneto-dielectric materials of the double nickel ferrite type. The method consists of pressing and sintering a suitable mixture of pure oxides of Fe, Ni, and Zn. The double ferrite has magneto-dielectric properties, contributing to its use at high frequency, and is characterized by a high resistance (small volume losses). To be usable in the frequency band of 0.15 -- 4.5 mc, the ferrite composition should have a NiO/ZnO ratio of 0.35 and a ratio $(NiO + ZnO)/Fe_2O_3 = 1$.

Card : 1/1

LABUSCA, E.

Studies on magneto-dielectric materials of the ferrite type.

p. 307 (Academia Republicii Populare Romine. Institutul de Fizica. Studii Si Cercetari De Fizica. Vol. 7, no. 2, Apr./June 1956. Bucuresti, Rumania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

LABUSKA, E.; LABUSKA, N.

"Experimental research on the specific properties of Rumanian hard mineral-ceramic materials for cutting metals."

p. 121 (Studii Si Cercetari De Metalurgie) Vol. 2, no. 1/2, 1957
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

LABUSCA, E.

Magnetic properties of mixed nickel ferrites of the type $NiO.ZnO.(MO,M_2O).Fe_2O_3$. E. Labusca. *Rev. phys., Acad. rep. populaire Roumaine* 2, 263–70 (1957) (in Russian); cf. *C.A.* 52, 7797g.—A series of double ferrites of the type $NiO.ZnO.Fe_2O_3$ (NZ) and mixed ferrites of the type $NiO.ZnO.Na_2O.Fe_2O_3$ (NA) were prepd. by powder-metallurgical methods (*C.A.* 52, 2302f). The magnetic permeability, μ, and the magnetic losses, tan δ, of both types increased with the ratio NiO:ZnO = 1:1, 55:35, and 8:42 at const. ratio (NiO + ZnO):Fe_2O_3 = 1. With a ratio of NiO:ZnO = 0.408 the values of μ of NZ and NA ferrites were 110 and 96, resp., and the values of tan δ 81 × 10^{-3} and 9 × 10^{-3}. The corresponding values of mixed ferrites $9NiO.38ZnO.4Na_2O.52Fe_2O_3$ (NA8) were 40 and 2–3 × 10^{3}, resp. The ratio tan δ/μ of ferrites NZ and NA8 were practically independent of the frequency. The values of μ and tan δ of ferrite $18CuO.21ZnO.56Fe_2O_3$ mixed with NA8 in the following proportions were: 1:0, 820 and 180 × 10^{-3}; 1:1, 165 and 42 × 10^{-3}; 1:2, 115 and 16 × 10^{-3}; 1:3, 63 and 9 × 10^{-3}; 0:1, 46 and 3.7 × 10^{-3}. The effect of CuO was ascribed to $CuFe_2O_4$ increasing μ and to the high conductance of CuO increasing tan δ.

1. Beneqyits—

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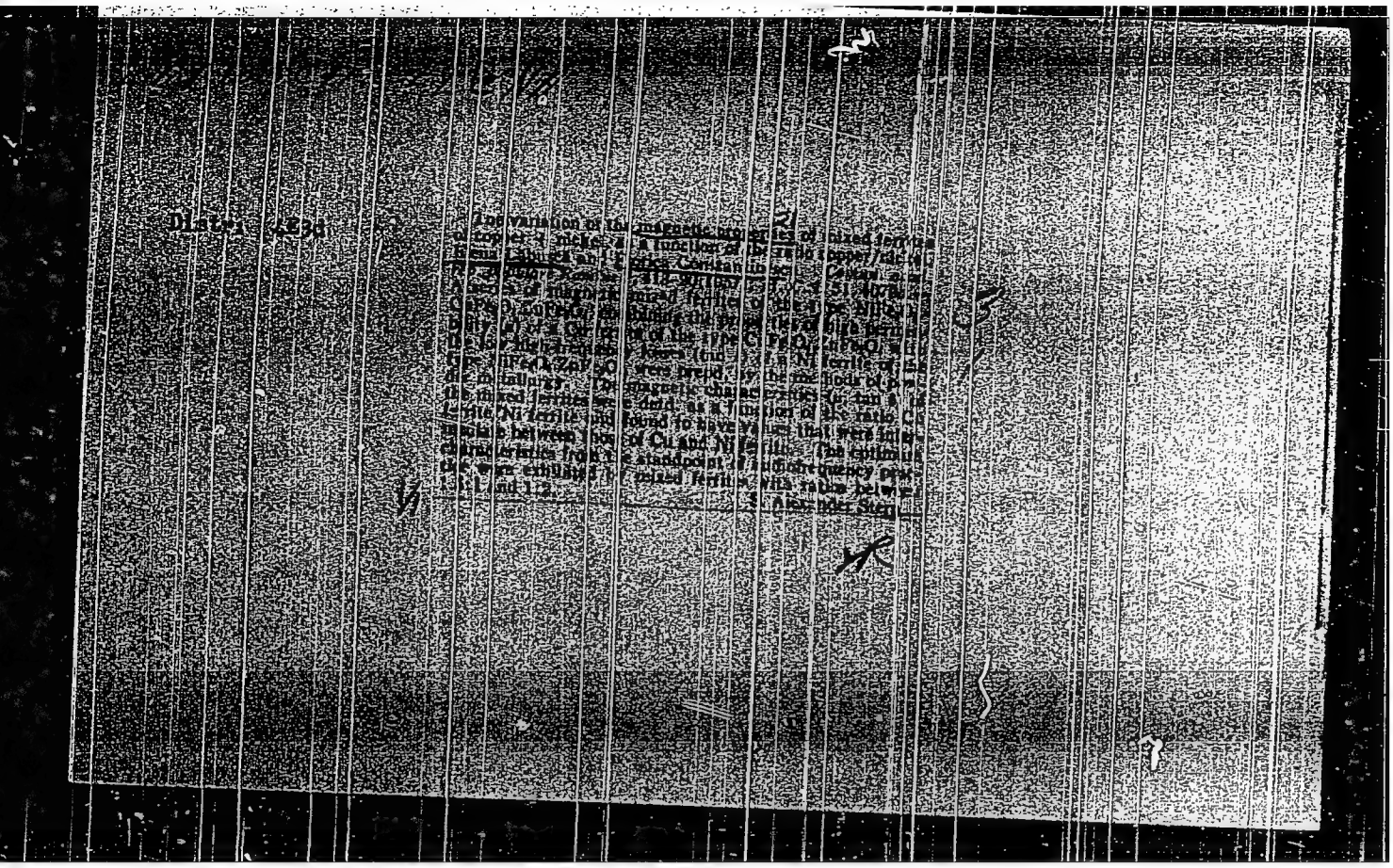

LABUSCA ELENA

F-6

RUMANIA/Magnetism - Ferrites and Ferrimagnetism

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 18205

Author : Labusca Elena, Constantinescu Florica
Inst : Not Given
Title : Variation of the Magnetic Properties of Mixed Ferrites Cu Ni as a Function of the Ratio of the Ferrite of Copper to the Ferrite of Nickel

Orig Pub : Studii si cercetari fiz. Acad. RPR, 1957, 8, No 3, 347-357

Abstract : On the basis of a nickel-ferrite of the type $NiFe_2O_4.ZnFe_2O_4$, which is characterized by an exceedingly small total losses, and a copper ferrite of the type $CuFe_2O_4.ZnFe_2O_4$, which is characterized by high permeability, the authors have developed a series of magnetic mixed ferrites of the type $NiFe_2O_4$. $CuFe_2O_4.ZnFe_2O_4$. By studying the variation of the magnetic properties (μ, $\tan\delta$) as functions of the ratio of the copper ferrite to the nickel ferrite, the authors have established that in the mixed ferrites, for which this ratio is greater than unity, the characteristics are closer to the

Card : 1/2

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 18205

characteristics of the initial nickel ferrite. They have noted tentatively a considerable variation in the magnetic properties of the copper ferrite in mixed ferrites which are rich in copper, as a function of the residual porosity.

12

~~ELENA~~ LABUSCA, E

Distr: 4E2c

Influence of the degree of sintering on the properties of mixed nickel ferrite. Elena Labusca, Gh. Stancu, and N. Andreescu. *Rev. met., Acad. rep. populaire Romaine* 3, No. 3, 79–88(1958)(in German).—The properties of sintered ferrites are closely related to the temp. of heat treatment, which, in turn, dets. a definite degree of sintering. By varying the degree of sintering, a particular ferrite of given compn. may be given different magnetic properties. Sintering at temps. lower than the optimum causes a rise in the porosity and a deterioration in magnetic properties. Tables are presented of magnetic permeability, specific resistance, and d; resulting from different sintering temps. for ferrites of the following compns. (wt. %): 15 Ni, 35 ZnO, 50 Fe_2O_3, 25 NiO, 40 ZnO, 35 Fe_2O_3, and 10 CuO, 4 NiO, 30 ZnO 50 Fe_2O_3.

E. M. Sherwood

F

RUMANIA/Magnetism - Ferrites and Ferrimagnetism.

Abs Jour : Ref Zhur Fizika, No 10, 1959, 22841

Author : Labusca, Elena; Constantinescu, Florica
Inst :
Title : Change in the Magnetic Properties of Mixed Cu Plus Ni Ferrites as a Function of the Relative Contents of the Copper Ferrite and the Nickel Ferrite

Orig Pub : Rev. phys. Acad. RPR, 1958, 3, No 2, 141-150

Abstract : An investigation was made of the system of mixed Cu-Ni-Zn ferrites. The extreme points were chosen to be those of Cu-Zn ferrite with a composition 20% CuO, 30% ZnO and 50% Fe_2O_3, which has a magnetic permeability approximately 500 - 700 and losses of approximately 0.1 - 0.2, and of a nickel-zinc ferrite with composition 15% NiO, 35% ZnO, and 50% Fe_2O_3, with an approximate permeability of 40 and losses of approximately 0.001 - 0.002. It was established that the magnetic properties of the ferrites

Card 1/2

LABUSCA, E.; TEODORESCU, I.; MIRION, I.

The study with an electronic microscope, of the crystallization process in ferrites and of the influence of the structure upon magnetic properties. Studii cerc fiz 11 no.2:363-370 '60. (EEAI 10:1)

(Ferrates) (Magnetic properties)
(Electron microscope) (Crystallization)

LABUSCA, E.; ANDRESCU, N.; TEODORESCU, I.; MIRION, I.

Contributions to the indentification of the causes determining the appearance of rectangular cycles of hysteresis in ferrites. Studii cerc fiz. 11 no.3:765-778 '60. (EEAI 10:2)
(Ferrates) (Hysteresis)

LABUSCA, E.; TEODORESCU, I.; MIRION, I.

A study on the graphitization of carbon black Studii cerc fiz 11 no.4:973-982 '60. (EEAI 10:8)

1. Institutul de fizica atomica, Bucuresti.
(Carbon black) (Graphitization)

LABUSCA, E.; ANDREESCU, N.

Specific magnetic properties of the ferrites used in automation.
Studii cerc fiz 12 no.4:853-870 '61.

1. Institutul de fizica atomica, Bucuresti.

S/058/63/000/002/051/070
A160/A101

AUTHORS: Lăbuşcă, E., Andreescu, N., Teodorescu, I.

TITLE: An electron-microscopic study of the structure of ferrites with a great permeability and a study of some of their specific properties

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 84, abstract 2E563 ("Rev. phys. Acad. RPR", no. 2, 1962, v. 7, 261 - 267)

TEXT: The effect of the duration of sintering of mixed Fe_2O_3 - MnO - MgO - ZnO ferrites on their structure and properties was studied. A comparison of the ferrites' macrostructures (obtained by the electron-microscopic method) with their magnetic properties reveals that the greatest permeability possess those ferrites which have the maximum structure homogeneity. In such ferrites, the maximum permeability increases with an increase of the sintering duration. A change of the maximum induction B_m is only observed at the first sintering stage until a stable ferrite structure develops, and then the magnitude B_m remains constant. The field corresponding to the maximum permeability decreases with an increase of the sintering duration. Investigated were also the temperature de-

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S/058/63/000/002/051/070
A160/A101

An electron-microscopic study of the...

pendence of permeability, its dependence on the field, and the spectra of the complex magnetic permeability in the frequency range of up to 300 kilohertz.

L. Sobolev

[Abstracter's note: Complete translation]

Card 2/2

LABUSCA, El.; ALECU, M.; MIRION, I.

Identification of impurity sources with exogenous nonmetallic inclusions of the steels in Siemens-Martin furnaces. Studii cerc metalurgie 7 no.3:351-359 '62.

(3)

RUMANIA

LABUSCA, Elena; ANDREESCU, Nicolae; MOTOC, Cornelia

Done during the Institute of Atomic Physics of the Rumanian Academy (Institutul de fizica atomica al Academiei R.P.R.) - (For all).

Bucharest, Studii si Cercetari de Metalurgie, No 2, 1963, pp 215-229

"The Effects of Irradiation With Neutrons On Structures and Magnetic Properties of Manganese and Lithium Ferrites of High Permeability."

(3)

LABUSCA, Elena; ANDREESCU, N.; MOTOC, C.

Effects o neutron irradiation on the magnetic structure and properties of manganese ferrites and lithium with high permeability. Rev Roum metalurg 8 no. 2:183-194 '63.

LABUSCA, Elena; ANDREESCU, Nicolae; MOTOC, Cornelia

Effects of neutron irradiation on the structure and magnetic properties of lithium and manganese ferrites of great permeability. Studii cerc metalurgie 8 no.2:215-229 '63

LEBUSHKE, E. [Labusca, E.]; ALEKU, M. [Alecu, M.]; ANDREESKU, N. [Andreescu, N.]
MOTSOK, K. [Motoc, C.]

Study on the wear of the refractory lining of blast furnaces with the aid of radioisotopes. Rev Roum metalurg 8 no. 2:251-263 '63.

LABUSCA, Elena

Influence of the technology of powder metallurgy on the properties of magnetic materials of the ferrite type. Studii cerc fiz 16 no. 10:1231-1246 '64.

1. Institute of Atomic Physics, P.O. Box 35, Bucharest.

S/058/62/000/010/077/093
A061/A101

24.7900

AUTHOR: Lăbuşcă, E., Andreescu, N.

TITLE: On the specific magnetic properties of ferrites used in automation

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 49, abstract 10E380 (Studii şi cercetări fiz. Acad. RPR", 1961, v. 12, no. 4, 853 - 870, Rumanian; summaries in Russian and French)

TEXT: The magnetic characteristics of ferrites with a rectangular hysteretic cycle and high permeability are presented. Methods of measuring these characteristics are indicated, and particular attention is devoted to those properties which account directly for the use of the ferrites concerned in electric circuits. A new method of measuring the ferrite resistance, and another new method of determining permeability in extremely weak fields, are given.

[Abstracter's note: Complete translation]

Card 1/1

RUMANIA

LASUSCA, El.

No degree given

No affiliation given

Bucharest, Studii si Cercetari de Metalurgie, No 3, 1962, pp 351-369.

"Study to Identify the Sources of Impurity through Exogenous Nonmetallic Inclusions of Steels Produced in Siemens-Martin Hearths."

Co-authors:

ALECU, M.

MIRON, I.

LABUSCA, El.; ALECU, M.; ANDREESCU, N.; MOTOC, C.

Wear of the refractory lining in blast furnaces studied with the aid of radioisotopes. Studii cerc metalurgie 7 no.4:465-477 '62.

L 6447-66 EWT(m)/EWA(h) DM
ACCESSION NR: AP5019804 UR/0089/65/019/001/0024/0028
543.52

AUTHOR: Labushkin, V. G.; Ruzer, L. S. 21 B

TITLE: On a method for determining the concentrations of short-lived daughter products of radon in air from the α and β radiation

SOURCE: Atomnaya energiya, v. 19, no. 1, 1965, 24-28

TOPIC TAGS: Alpha radiation, Beta radiation, radon radioactive decay, atmospheric radioactivity, half life, atmospheric contamination

ABSTRACT: The proposed method is based on measurement of the α and β activities of a filter through which air containing RaA, RaB, and RaC is drawn. The two activities of the daughter products are measured simultaneously by means of a spectrometric technique of increased accuracy. A thin filter (NEL or LFS used for α spectrometry), through which air is blown from a radon-containing chamber, is placed between two photomultipliers (FEU-13), one covered with stilbene and the other with CsI(Tl). The outputs of each multiplier are amplified and passed through a pulse-height analyzer. The filter readings were calibrated against a non-emanating radium source. The activities were determined by comparing the number of counts from the radium source. Expressions are derived for the activities of RaA, RaB, and RaC in the

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ACCESSION NR: AP5019804

4

filter at the instant of termination of filtration from the equation for the radioactive-transformation chain and for the concentrations of these products for the case when the parent radioactive substance is long-lived. The results are compared with those obtained by E. Tsivoglou et al. (Nucleonics v. 11, no. 9, 40, 1953) and the claims of higher accuracy for the described method are briefly justified. "The authors are deeply grateful to D. M. Ziv, Ye. A. Volkova, and Yu. V. Mazurek of the Radiyevyy institut AN SSSR (Radium Institute AN SSSR) for preparing the non-emanating Ra^{226} sources." Orig. art. has: 3 figures, 3 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 03Jul64 ENCL: 00 SUB CODE:

NR REF SOV: 003 OTHER: 001

Card 2/2

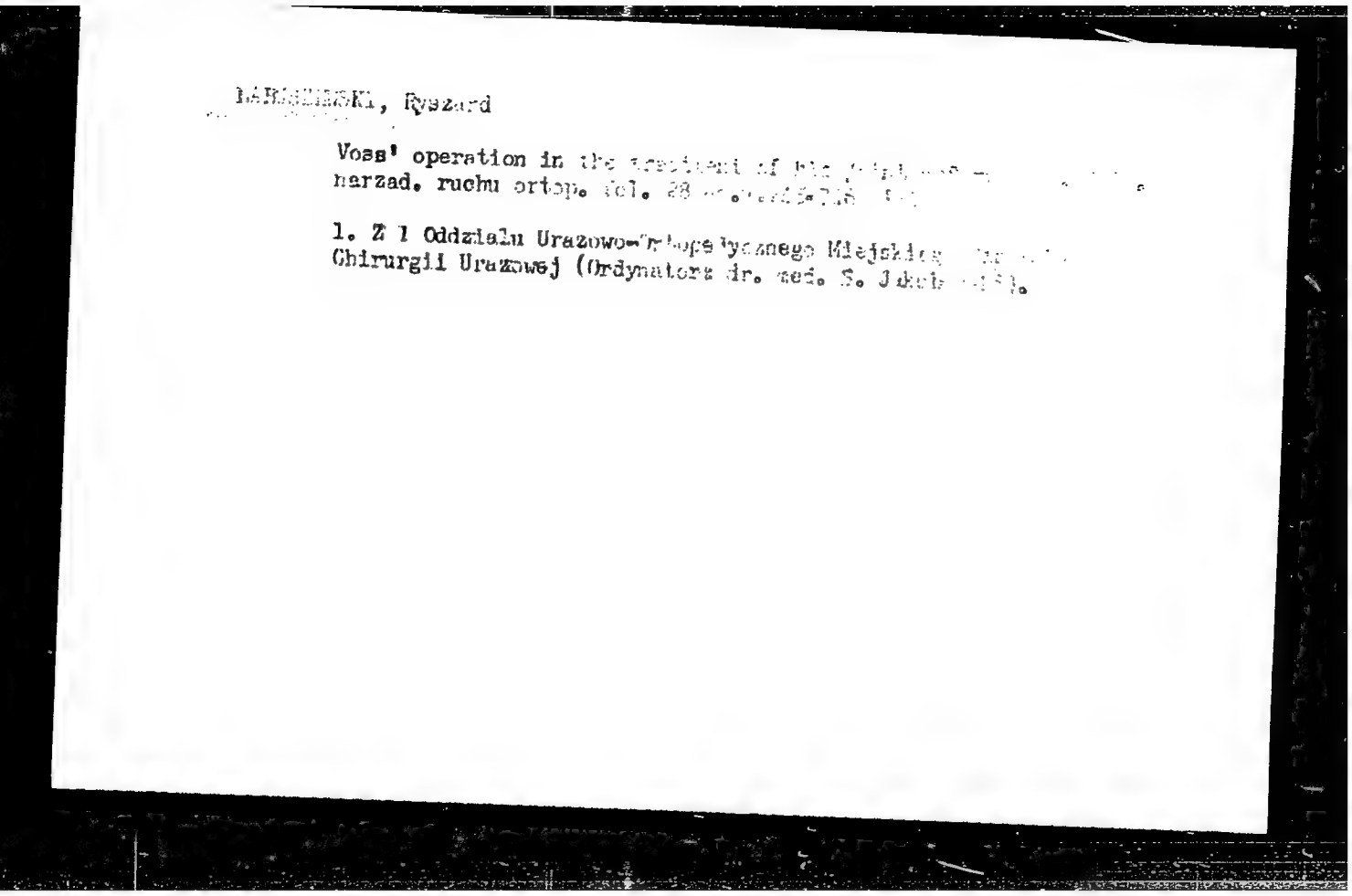
LABUSHKIN, V.G.; POLEV, N.M.; RUZER, L.S.

Determining the self-absorption of alpha rays in a sample of air being filtered. Atom. energ. 19 no.1:39 Jl '65. (MIRA 18:7)

PLOTNIKOV, A.Ya.; GNEZDOV, V.I.; LABUSOVA, A.I.; BOGAYEVSKAYA, R.P.

Isolation of tall oil by the separation method. Gidroliz. i lesokhim. prom. 16 no.1:21-23 '63. (MIRA 16:2)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut lesokhimicheskoy promyshlennosti (for Plotnikov, Gnezdov, Labusova).
2. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (for Bogayevskaya).
(Tall oil)



[illegible], Ryszard

Voss' operation in the [illegible]
narzad. ruchu ortop. tol. 28 [illegible]

1. Z I Oddziału Urazowo-[illegible]ego Miejskiego [illegible]
Chirurgii Urazowej (Ordynator: dr. med. S. Jakub[illegible]).

JAKUBOWSKI, Sylwester; dr. med.; BAZYLCZUK, Lech; LABUSZEWSKi, Ryszard

Lesions of the tendons of the hand in rheumatoid patients. Reumatologia (Warsz) 3 no.1:35-42 '65.

1. Z I Oddzialu Urazowo-Ortopedycznego Miejskiego Szpitala Chirurgii Urazowej w Warszawie (Ordynator: dr. med. S. Jakubowski) i z Wojewodzkiej Przychodni Reumatologicznej w Warszawie (Dyrektor: dr. med. H. Znajewska-Zarembina).

VISHNEVSKIY, Isaak Davidovich; LABUT, Andrey Aleksandrovich; LEMESHCHUK, Petr Kondrat'yevich; CHERKES, Mikhail Yur'yevich; MALAKHOV, K.N., inzh., retsenzent; PREDE, V.Yu., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Industrial transportation sections and railroad stations]Transportnyi tsekh i stantsiia. Moskva, Transzheldorizdat, 1962. 58 p. (MIRA 15:11)
(Railroads, Industrial) (Railroads—Freight)

LABUTIN, A., kand. tekhn. nauk; MONAKHOVA, K.

Protection against marine corrosion by liquid nairits. Mor. flot 25 no.7:33-34 Jl '65. (MIRA 18:7)

1. Starshiy inzh. antikorroziynoy laboratorii Vsesoyuznogo nauchno-issledovatel'skogo instituta sinteticheskogo kauchuka imeni akademika S.V.Lebedeva (for Monakhova).

SHVETS, Ivan Trofimovich, prof.; TOLUBINSKIY, Vsevolod Ivanovich, prof.; KIRAKOVSKIY, Nikolay Feliksovich, dots.; NEDUZHIY, Ivan Afanas'yevich, dots.; SHELUD'KO, Ivan Mikhaylovich, dots.; VOZNESENSKIY, A.A., prof., retsenzent; LABUTIN, A.A., spets. red.; BALYASNAYA, A.Ye., red.

[General heat engineering] Obshchaia teplotekhnika. [By] I.T.Shvets i dr. Kiev, Izd-vo Kievskogo univ., 1963. 562 p. (MIRA 17:10)

LABUTIN, Aleksandr Alekseyevich

SHELUD'KO, Ivan Mikhaylovich; LABUTIN, Aleksandr Alekseyevich; SHCHEKINA, Galina Afanas'yevna; TUROVSKIY, B.redaktor; ZELENKOVA, Ye.tekhnicheskiy redaktor

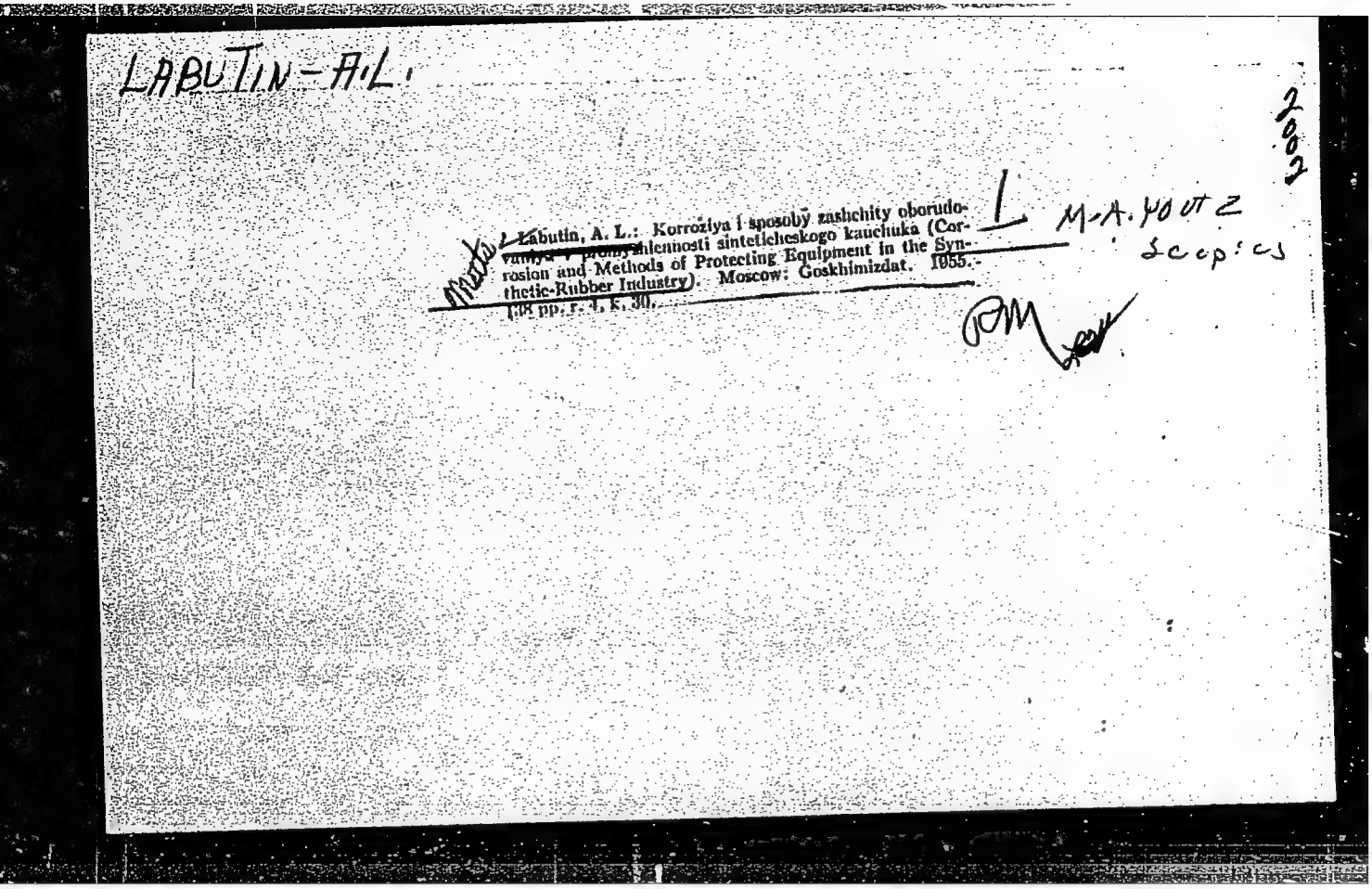
[Heat power engineering equipment for machine-tractor stations] Teploenergeticheskoe oborudovanie MTS; spravochnoe posobie. Kiev, Gos. izd-vo lit-ry po stroit. i arkhit. USSR, 1956. 202 p. (MLRA 10:4)

(Heat engines) (Machine-tractor stations)

LABUTIN, A.L.

Renovation of color ribbons for self-recording instruments.
Priborostroenie no. 2:27 F '61. (MIRA 14:1)
(Recording instruments--Maintenance and repair)

304. Nemetallicheskie Korrozionnostoikie Materialy i Pokrytiya. Nauchno-Tekhnicheskoe Soveshchanie po Bor'be s Korroziei v Khimicheskoi Promyshlennosti 15-21 Noyabrya 1953g. (Non-metallic corrosion-resistant materials and coatings. Scientific and technological conference on combating corrosion in the chemical industry, 15-21 Nov., 1953). A. L. LABUTIN and K. V. POLYAKOV, editors. U.S.S.R., Vsesoyuznoe Nauchnoe Inzhenerno-Tekhnicheskoe Obshchestvo Rezinovoi i Kauchukovoi Promyshlennosti. (VNITO Rezinshchikov). Leningrad: Goskhimizdat, 1955, pp. 143. This volume contains the proceedings of a conference convened by Glavkauchuk and the Leningrad section of VNITO, including I. Ya. Klinov on Asbovinil; A. L. Labutin on polyisobutylene-based anti-corrosion materials; G. S. Brodskii on new chemically-resistant plastics and their prospects; N. L. Gol'denberg on chemically resistant binders; and N. N. Zolotov on anti-corrosion paints based on Etinol. 3B620M3431



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928410008-9"

LABUTIN, A. L.

"New Corrosion-resistant Nonmetal Materials"

The Kirov District of Leningrad Strives for Technological Progress; Collection of Articles, Leningrad, Sudpromgiz, 1957. 171pp.

This collection of articles describes the progressive experience of the industrial plants of the Kirov district of the city of Leningrad in the fields of shipbuilding, machine building, instrument-making, casting, hydrolytic and other industries. New manufacturing methods are discussed.

LABUTIN, A.L., kandidat tekhnicheskikh nauk.

Use of synthetic rubbers in corrosion prevention. Khim. nauka i prom. 2 no.3:359-365 '57. (MLRA 10:8)
(Rubber, Synthetic) (Corrosion and anticorrosives)

32-3-38/52

AUTHORS: Pigulevskiy, V.V. Labutin, A.L.

TITLE: A Block Furnace for the Testing of Catalyzers and the Investigation of Catalytic Reactions (Blochnaya pech' dlya ispytaniya katalizatorov i izucheniya kataliticheskikh reaktsiy)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, NR 3, pp. 358-359 (USSR)

ABSTRACT: A block furnace for the investigation of catalytic dehydration reactions of butane and butylene as well as of the dehydration catalyzers themselves was constructed. The block is of highly refractory aliminum bronze AB p10 of good thermal conductivity. As is shown by a drawing, the furnace has the usual appearance, two channels being provided for the purpose of cooling or operation in certain gas atmospheres. The furnace work at temperatures of from 550° to 675° for up to 10,000 hours without any repair being necessary. The thermoregulator works with an accuracy of up to 3 to 4° C. Selection of the metal for the interior of the surface depends on test conditions. For the aforementioned tests steel of the type ЭИ28 having a chromium content of about 27% was used

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A Block Furance for the Testing of Catalyzers and the Investigation of Catalytic Reactions

32-3-38/52

with success at 550 - 675° C. There are 1 figure, and 2 references, 1 of which is Slavic.

ASSOCIATION: All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev (Vsesoyuznyy nauchno-issledovatel'skiy Institut sinteticheskogo kauchuka im. S.V. Lebedeva)

AVAILABLE: Library of Congress

1. Catalyzers-Test methods 2. Catalytic reactions-Investigations
3. Furnaces-Applications

Card 2/2

S/081/62/000/007/032/033
B168/B101

AUTHOR: Labutin, A. L.

TITLE: New protective coatings based on synthetic rubbers and polymers akin to them

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 658, abstract 7P346 (Sb. "Zashchita izdeliy ot vozdeystviya tropich. klimata". L., 1959, 82-107)

TEXT: Use of nairit, polyisobutylene of various makes, butyl rubber and thiocol. Methods of application: gas-flame dusting, dipping in a "pseudoliquid layer". Corrosion-resistance tables for different materials are given. [Abstracter's note: Complete translation.]

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5(1) PHASE I BOOK EXPLOITATION SOV/3316

Labutin, Aleksandr Lukich

Korroziya i sposoby zashchity oborudovaniya v proizvodstve organicheskikh kislot i ikh proizvodnykh (Corrosion and Methods of Protecting Equipment Used for Production of Organic Acids and Their Derivatives) Moscow, Goskhimizdat, 1959. 184 p. (Series: Korroziya v khimicheskikh proizvodstvakh i sposoby zashchity, vyp. 13) Errata slip inserted. 3,500 copies printed.

Ed. (Title page): G. V. Sagalayev; Ed. (Inside book): S.I. Belen'kiy; Tech. Ed.: V. F. Zazul'skaya; Editorial Board of Series: N. A. Baklanov, V. Ye. Volodin, V. S. Kiselev (Chairman), I. Ya. Klinov, V. I. Kruchinin (Deceased), (Secretary), G. V. Sagalayev (Deputy Chairman) and P. G. Udyma.

PURPOSE: This booklet is intended for technicians of chemical plants and for staff members of scientific research institutes and design organizations.

COVERAGE: An attempt is made to analyze the process of corrosion caused by acid, salt or oxygen and to determine the possibility

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of combatting corrosion of equipment used in acid production. The scale showing the corrosion rate of different metals in contact with acid is presented, and steel alloys most resistant to corrosion are analyzed. Production of industrial organic acids such as acetic, formic and oxalic is described, as well as production of food industry acids such as citric, tartaric and lactic. The author illustrates flow sheets of units producing acids of various types and the equipment used for this purpose. He also discusses the problem of protecting equipment against corrosion during the production of acetic anhydride, subacetates, acetyl cellulose, cellulose triacetate and polyvinyl acetate. Manufacturing of equipment built of stainless steel is briefly reviewed and the utilization of clad steel and bimetallic pipes in acid production described. Replacement of equipment parts made of expensive nonferrous metals by parts made of synthetic material is discussed. There are 53 references: 44 Soviet, 5 English and 4 German.

TABLE OF CONTENTS:

Corrosion and Methods (Cont.) SOV/3316

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AVAILABLE: Library of Congress
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TM/ec
3-21-60

LABUTIN, A.L.

[Inhibitors for atmospheric corrosion] Ingibitory atmosfernoi korrozii. Leningrad, TSentr.biuro tekhn.informatsii, 1960. 73 p. (MIRA 15:7)
(Corrosion and anticorrosives)

34882

S/081/62/000/003/042/90
B156/B101

18.8310

AUTHORS: Persiantseva, V.P., Rozenfel'd, I. L., Novitskaya, M.A., Akimova, T.I., Labutin, A.L.

TITLE: Mechanism by which volatile inhibitors work

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 327-328, abstract 31211 (Vestn. tekhn. i ekon. inform. N.-i in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR i khimii, no. 2, 1961, 68-76

TEXT: Research into the protective properties of a large number of compounds used as volatile corrosion inhibitors (VCI) has revealed a number of VCI which are effective at protecting steel and nonferrous metals from corrosion (a table is included). Study of the electrochemical behavior of steel in the presence of VCI has shown that a potential shift characteristic of adsorption of VCI by the metal surface takes place. The effects of four VCI are examined in detail; these are benzyl amine, morpholine, dicyclohexyl amine nitrite, and cyclohexyl amine carbonate. It has been found that VCI is adsorbed in the form of molecules or ions

Card 1/2

Mechanism by which ...

which develop as a result of hydrolysis in an aqueous film of electrolyte (complex organic cations, hydroxyl groups, or acid residue). These adsorbed groups in some cases only retard the rate of anodic reaction, and in other cases the rates of both anodic and cathodic reactions. It is pointed out that the properties which should be used as the basis on which to gauge the effectiveness of VCI are: the vapor pressure, the adsorption capacity and bond strength of the VCI or protective group and the metal surface, and also the degree to which electrochemical reactions, which govern the corrosion process, are retarded by the VCI. [Abstracter's note: Complete translation.]

Card 2/2

LABUTIN, A.L.; KALINICHEVA, N.A.; KACHALOVA, R.V.; TRENKE, K.M.

New organic solvents and their possible application to the lacquer and paint manufacture. Lakokras. mat. i ikh prim. no.3:25-26 '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V. Lebedeva.
(Solvents)
(Paint industry)

18.8310
15.9202

26988

S/138/61/000/005/001/006
A051/A129

AUTHORS: Klebanskiy, A. L., Tsukerman, N. Ya., Kartsev, V. N., Labutin, A. L., Trenke, Yu. V., Mal'shina, L. P., Borovikova, N. A., Karelina, G. G., Rozhkov, Yu. P.

TITLE: A new type of chloroprene rubber: liquid nairite
(This work was awarded the second prize at the VKhO im. D. I. Mendeleyev competitions in 1959)

PERIODICAL: Kauchuk i rezina, no. 5, 1961, 1 - 5

TEXT: The high chemical stability, the gasoline-petroleum stability and ozone-resistance of chloroprene rubber makes it a suitable material for anti-corrosion coating and hermetic sealing. However, the difficulty of producing highly-concentrated solutions based on commercial nairite limited the application of the latter in anti-corrosion technique. It has been assumed that the use of low-molecular polymers for this purpose would enable one to obtain low-viscose, highly-concentrated solutions satisfying the anti-corrosion techniques. One of the methods for producing low-molecular polymers is the use of the polymerization of increased concentrations of regulator-compounds able to break the chains and to form new ac-

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A new type of chloroprene rubber: liquid nairite

tive centers. Sulfurous compounds, such as mercaptane, thioacids, xanthogenesulfides, are widely used as regulators. When studying the action of n-tetradecylmercaptane, diisopropylxanthogenedisulfide and bisethylxanthogenedisulfide during the process of polymerization of chloroprene, it was established that with an increase in the concentration of the regulator the molecular weight of the polymer drops correspondingly and the plasticity of the rubber increases. It was assumed that the use of greater quantities of bisethylxanthogenedisulfide in the polymerization of chloroprene in emulsion decreases the molecular weight of the polymer and yields low-viscosity solutions of rubber. An attempt was made to produce low-molecular polychloroprene by polymerization of chloroprene in the presence of sulfur with subsequent destruction of the polymer. It was shown that the action of sulfur differs from that of other regulators. The effect of sulfur on the polymers of chloroprene is shown by the scheme: $-(CH_2-CCl=CH-CH_2)_n-S_x-(CH_2-CCl=CH-CH_2)_m-S_x$, where x=2-6. The sulfur forms linear bonds in the polymer chain. With an increase in the bound sulfur content in the polymer the molecular weight of the polymer decreases in the subsequent interaction with thiuram from 600,000 to 280,000 with 0.3% of bound sulfur and from 300,000 to 43,000 with 1% of bound sulfur. The quantity of reacted thiuram increases respectively. The destruction scheme is given as follows: 1) The formation of free radicals under the effect of the thermal action or thiuram:

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A new type of chloroprene rubber: liquid nairite

S/138/61/000/005/001/006
A051/A129

$-(CH_2-CCl=CH-CH_2)_n-S-S-S-S-(CH_2-CCl=CH-CH_2)_m-S-S-S-S- \rightarrow -(CH_2-CCl=CH-CH_2)_n-S$;

2) Recombination of the polymer radical with molecular thiuram and splitting off of the latter along the -S-S-bond:

$$-(CH_2-CCl=CH-CH_2)_n-S\cdot + (C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S-S-\overset{\overset{S}{\|}}{C}-N(C_2H_5)_2 \rightarrow$$

$$\rightarrow -(CH_2-CCl=CH-CH_2)_n-S-S-\overset{\overset{S}{\|}}{C}-N(C_2H_5)_2 + (C_2H_5)_2N-\overset{\overset{S}{\|}}{C}-S\cdot$$

Based on the outlined assumptions of the mechanism of the sulfur action during the process of chloroprene polymerization and destruction of the polymer under the effect of the chemical masticating substances, the conditions for producing low-molecular chloroprene rubber-"liquid" nairite were developed. The liquid types of nairite can be obtained on a typical apparatus. The sulfur can be introduced in the form of solutions in mineral oils as well as aqueous dispersions obtained in the presence of emulsifiers and protective colloids. It was shown by V. N. Kartsev, M. A. Gutman, G. G. Karelina, F. Ye. Berman, Ye. G. Malinovskaya, M. B. Shur at VNIISK, no. 2389, 1951, that for mastication the most effective system is mercapto-

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A new type of chloroprene rubber: liquid nairite

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benzothiazol (captax)-diphenylguanidine (DPhG). To increase the activity of these agents, tetramethylthiuramdisulfide was added (thiuram D) or tetraethylthiuramdisulfide (thiuram E). Literature data indicate that active masticating agents of polychloroprene are the piperidine salt of hexamethylenedithiocarbamine acid or ammonium hexamethylenedithiocarbamate. The order of introduction of the agents plays an important role. The effect of the type and composition of the carbon black on the solubility of the rubber mixtures from "liquid" nairite was investigated. Only the thermal carbon black helps to retain complete solubility. Higher indices of relative elongation when filling with 100 w.p. and over are achieved with thermal carbon black. The composition and technology for preparing the rubber mixtures based on the "liquid" nairite with thermal carbon black as filler yielded highly-concentrated solutions (70 - 75%). These solutions are suitable for sealing various equipment by the same methods which are used in the case of dye and varnish coatings. Tests of coatings made of liquid nairite in experimental and natural samples in various industrial fields showed the expediency of using this product as a material for protecting the metal from corrosion, erosion, cavitation and also as a material for hermetic sealing. There are 4 tables and 21 references: 2 Soviet-bloc, 19 non-Soviet-bloc. The references to the 4 most recent

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26988 S/138/61/000/005/001/006
A new type of chloroprene rubber: liquid nairite A051/A129

English-language publications read as follows: Corros. Technol., 5, no. 4, 107 (1958); R. B. Seymour a. oth., Plastics for Corrosion Resistant Application, N.Y., 1955, 90; Rubb. a. Plast. Age, 39, no. 8, 684 (1958); Corros. Technol., 3, no. 3, 89 (1956).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev)

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A051/A129

AUTHORS: Labutin, A. L., Klebanskiy, A. L., Tsukerman, N. Ya., Kartsev, V. N., Trenke, Yu. V., Mal'shina, L. P., Borovikova, N. A., Karelina, G. G., Rozhkov, Yu. P.

TITLE: "Liquid nairite" - a new material for rubberizing

PERIODICAL: Kauchuk i rezina, no. 6, 1961, 5 - 8

TEXT: The authors state that in the chemical destruction of "liquid" nairite, highly concentrated solutions can be produced which are applicable as a material for rubberizing. In the USSR a safer binary solvent, consisting of 2 weight parts of ethylacetate and 1 w.p. of gasoline is used in nairite adhesives. Experiments showed, however, that this solvent in "liquid" nairite is not suitable for many technical reasons. Better results were obtained in using a ternary solvent consisting of 76% solvent, 19% turpentine and 5% n-butanol. The latter component does not dissolve the nairite, but facilitates the use of the brush for painting and good coating distribution. It was noted that film vulcanization from liquid nairite at 20°C does not show positive results. Thus various forms of thermal vulcanization were investigated: vulcanization with heated air, live vapor, hot water

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"Liquid nairite" - a new material for rubberizing

and infra-red irradiation. It was established that the most suitable method was vulcanization by hot air. The physico-mechanical indices of nairite coatings vulcanized in air at various temperatures are given in Fig. 1. Fig. 2 shows the relationship between the temperature and duration of the vulcanization. The most suitable temperatures of vulcanization in air are within the range of 100 - 142°C. It was noted that the liquid nairite coatings did not possess the proper adhesion to metal. Thus certain other adhesives or coatings ensuring better adhesion between metal and coating were sought. The best results were obtained with the following three materials: standard leuconate (organic base: n, n', n" - triisocyanate-triphenylmethane), chloronairite adhesive (organic base: chloronairite and nairite) and a primer, tentatively called epoxide primer (organic base: epoxide resin, chloronairite and nairite). The chemical stability and anti-corrosion properties of the vulcanized nairite coatings were studied. The conclusion was drawn that 1.2-mm nairite coatings in combination with a water-resistant coating applied three times can reliably protect metals from corrosion due to aqueous solutions of many acids, alkali and salts. The coatings were not resistant to the action of oxidizing agents, aromatic and halided solvents. Rubber coatings differ from varnish and plastic coatings by an increased resistance to abrasive wear. An attempt was made

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"Liquid nairite" - a new material for rubberizing

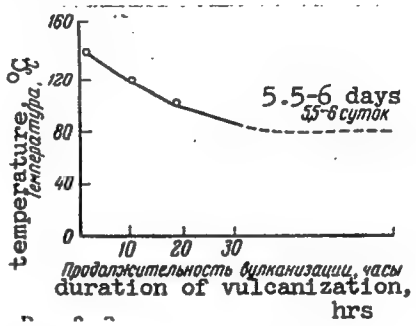
to determine the resistance of nairite coatings under conditions of dry friction using the Grosselli-type machine. It is concluded that coatings of so-called crystallizing liquid nairite obtained in low-temperature polymerization are superior to other rubbers in their wear-resistance, excepting vulcollane, which has a unique resistance to abrasive wear. It was established that coatings of liquid oil nairite are superior to coatings of bakelite, polyethylene and caprone, when tested in rapidly flowing sea water. Tests have further shown that liquid nairite as a material for coatings will become widely used in industry in the next few years. At present tests are being conducted in the North Sea and the Atlantic Ocean on propellers of fishing trawlers coated with liquid nairite for protection from corrosion, erosion and cavitation. Mechanical plants are testing steel covers of refrigerators and condensators coated with nairite. These were previously manufactured from non-ferrous metals. Certain chemical plants have installed diaphragm valves, the interior of which is covered with liquid nairite to prevent corrosion from acid solutions, alkali and salts. The possibility of using nairite coatings in various instruments as a means for preventing spark formation in percussion has also been revealed. Finally, it was established that these coatings can be used in certain constructions for hermetic sealing. At the Moscow TETs NO 12 a vacuum-condensator of a mass-produced 50 thousand kw steam turbine withstood a

"Liquid nairite" - a new material for rubberizing

testing period of one and a half years with the brass pipes and steel pipe boards coated with liquid nairite. K. S. Shmurey, O. P. Abolina, A. I. Konstantinova and G. A. Selivanovskaya took part in the work. There are 2 tables and 2 sets of graphs.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev)

Fig. 2. Dependence of the vulcanization duration of the coatings made of liquid nairite on the temperature



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LABUTIN, A.L., kand.tekhn.nauk

New protective coatings of synthetic rubber. Mashinostroitel' no.5: 38-40 My '61. (MIRA 14:5)
(Protective coatings) (Rubber, Synthetic)

KLEBANSKIY, A.L.; TSUKERMAN, N.Ya.; KARTSEV, V.N.; LABUTIN, A.L.; TRENKE, Yu.V.; MAL'SHINA, L.P.; BOROVIKOVA, N.A.; KARELINA, G.G.; ROZHKOV, Yu.P.

Liquid nairit, a new type of chloroprene rubber. Kauch.i rez. 20 no.20:1-5 My '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.
(Rubber, Synthetic) (Neoprene)

BERMAN, L.D., doktor tekhn.nauk; LABUTIN, A.L., kand.tekhn.nauk; FUKS, S.N., kand.tekhn.nauk; MAL'SHINA, L.P., inzh.; SHMUREY, K.S., inzh.

Rubberizing of the tube plates of a steam turbine condenser with "liquid" nairit. Elek. sta. 32 no.7:6-10 Jl '61. (MIRA 14:10)
(Steam turbines) (Neoprene)

LABUTIN, Aleksandr Lukich, kand. tekhn. nauk; FEDOROVA, Nina Stepanovna; SLOBODIN, Ya.M., prof., red.; VASIL'YEV, Yu.A., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Anticorrosive and sealing thiokol compounds] Antikorrozionnye i germetiziruiushchie tiokolovye sostavy. Leningrad, 1962. 21 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Sinteticheskie materialy, no.4) (MIRA 15:10)

(Rubber, Synthetic)
(Corrosion resistant materials)

LABUTIN, Aleksandr Lukich, kand. tekhn. nauk; FEDOROVA, Nina Stepanovna; SLOBODIN, Ya.M., prof., red.; VASIL'YEV, Yu.A., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Hermetic seals from rubbers]Germetiki na osnove kauchukov; stenogramma lektsii. Leningrad, 1962. 47 p. (MIRA 15:10)

(Sealing (Technology)) (Rubber, Synthetic)

LABUTIN, Aleksandr Lukich; BELEN'KAYA, S.M., red.; SHPAK, Ye.G., tekhn. red.

[Use of rubbers in anti-corrosive equipment] Kauchuki v antikorrozionnoi tekhnike. Moskva, Goskhimizdat, 1962. 111 p. (Korroziia v khimicheskikh proizvodstvakh i sposoby zashchity, no.18) (MIRA 15:7)

(Rubber coatings)
(Corrosion and anticorrosives)

BOCHMANOV, D.V., inzh.; LABUTIN, A.L., kand.tekhn.nauk; MAL'SHINA, L.P., inzh.; MONAKHOVA, K.S.

Synthetic materials in ship repair. Sudostroenie 28 no.7:56-61 Jl '62. (MIRA 15:8)
(Ships--Maintenance and repair) (Protective coatings)

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AUTHOR: Labutin, A. L.

TITLE: New liquid polymers and rubber coatings based on them

SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by I. Ya. Klinov and P. G. Udyma. Moscow, Mashgiz, 1962. Vses. sovet nauchno-tekhn. obshchestv. 31-40

TEXT: Three rubberlike materials have been developed in the Soviet Union to be used as protective coatings for metal parts of chemical apparatus. (1) Liquid nairit, a low-molecular polychloroprene, similar to the US-made liquid neoprene. Carbon black and vulcanizers (MgO, ZnO) are added. A mixture of 76% solvent naphtha, 19% turpentine, and 5% n-butyl alcohol is recommended as solvent. The vulcanization is performed within 18-22 hrs by heating in air at 100°C. A sprayer operating with 15-18 atm compressed air was developed at the Tsentral'noye konstruktsionnoye byuro armaturostroyeniya (TsKBA; Central Design Office of Fittings Construction). Physicomechanical characteristics are: specific gravity 1.4-1.5; tensile strength 70-90 kg/cm^2; relative elongation 240-280%; residual elongation 4-12%; flexibility determined by the ШГ-1 (ShG-1) apparatus, 1; impact

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strength determined by the У-1А (U-1A) apparatus, 50; adhesion to primed steel 30-50 kg/cm^2; brittleness point -40°C; no porosity and no permeability to water of a nairit film 0.5 mm thick; 3-10% swelling after 30 days' lying in water; satisfactory oilproofness. Glues and primers used: "leuconate", a solution of p,p',p"-diisocyanate-triphenyl methane in dichloro ethane: adhesion to steel 15-20 kg/cm^2; chlorinated rubber glue (solution of chlorinated nairit and nairit): adhesion 30-35 kg/cm^2; and primer 33 (solution of chlorinated nairit, nairit, and epoxy resin): adhesion 40-50 kg/cm^2. There is also high adhesion to aluminum and nonferrous metals, except copper. The chemical stability of nairit coatings is being tested in chemical plants. The data agree with those for US-made neoprene, except for instability to 20% HCl and 10% acetic acid at 60°C. (2) Liquid thiokol, a polysulfide rubber vulcanizing within 24 hrs at room temperature, waterproof and highly oilproof. Three thiokol sealers are produced in the Soviet Union: У-30М (U-30M) containing carbon black, no solvent; УТ-31 (UT-31) containing titanium white, and ВТУР (VTUR) containing a solvent and adhesive admixtures. Physicomechanical characteristics of the coatings: specific gravity 1.8-2.5; tensile strength 20-40 kg/cm^2; relative elongation 250-400%; residual elongation

3-10%; adhesion to steel 25-35 kg/cm^2; swelling in H_2O (30 d) 1-1.5%; other data agree with those for nairit. Thiokol coatings are unstable to 10% HNO_3, 50% H_2SO_4, 30% HCl, benzene, dichloro ethane, and chloro benzene. After thorough testing liquid self-vulcanizing thiokol sealers will be used in the aircraft, shipbuilding, instrument-making and other industries. (3) liquid siloxane, a mixture of liquid siloxane rubber and powdered silica gel; vulcanizers are added before use. The coatings are stable between -50 and +250°C, but poorly resistant to dilute acids and alkalis. Physicomechanical properties: sp.gr. 1.9-2.2; tensile strength 15-25 kg/cm^2; relative elongation 180-220%; residual elongation 1-3%; adhesion to steel 6-10 kg/cm^2; brittleness point -50°C; swelling in H_2O 1%; not oilproof; other data accord with those for nairit. There are 5 tables.

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